

### **REMARKS**

The Examiner, Dr. Ardin H. Marschel, is thanked for the courtesy of the interview conducted with Applicants' counsel on September 21, 2004. In this Amendment, Applicants have endeavored to present amended claims consistent with the subject matter that the Examiner advised at the interview was directed to patentable subject matter. Accordingly, reconsideration of this application is respectfully requested.

At the end of the interview held on September 21, 2004, the Examiner requested that Applicants provide an interview summary record in their next response. Accordingly, Applicants provide below an interview summary record. A summary of the status of the claims is also provided below indicating canceled claims, amended claims and all pending claims following this amendment.

#### **Interview Summary Record**

##### *Purpose of the Interview*

The interview began with Applicants' attorney explaining that the purpose of the interview was to discuss and possibly resolve some matters related to Applicants' modified interference request being drafted and Smith's U.S. Patent No. 5,821,058. Applicants' attorney also noted that sequencing claims were presented in the '069 Application more than one and a half years before the issuance of Smith's '058 Patent.

##### *Different Fluorescent Labels and Spectral Characteristics*

Applicants' attorney explained that different fluorescent labels and different colored labels are disclosed in Example 9 in the '069 specification, and that these labels provide the spectral characteristics disclosed and claimed in Smith's '058 Patent. The Examiner responded that spectral characteristics could include more than the visible light portion of the [electromagnetic] spectrum. Applicants' attorney pointed out, however, that in column 4, lines 52+ of Smith's '058 Patent, three fluorescent dyes are disclosed [fluorescein, rhodamine and substituted rhodamine], and that the same fluorescein and rhodamine are disclosed in the '069 specification, and were even originally

claimed in Applicants' initial June 1982 filing [citing original claims 42, 87 and 88]. Applicants' attorney added that the use of different colored fluorescent labels in the '069 specification was equivalent to the use of Smith's fluorescent dyes distinguishable by their spectral characteristics.

#### *Different Colored Labels*

On the subject of Smith's chromophores and Applicants' colored labels disclosed in the '069 specification [Example 9], no agreement was reached. The Examiner did suggest, however, that a search could be made in the '069 specification for other possible colored compounds that are not fluorescent and which might meet Smith's chromophores. If any colored compounds could be found, then Applicants could include them in the modified interference request.

#### *Format of the Modified Interference Request*

Applicants' representative asked the Examiner whether it would be preferable to revise the first interference request by deleting the term chromophore, or to submit the next request in McKelvey count format, again without the inclusion of chromophore. The Examiner indicated that he was familiar with the McKelvey count and that he could go along with that format in Applicants' modified interference request. In response to a further question from Applicants' representative, the Examiner acknowledged that if Applicants prevailed on priority with respect to fluorophores or fluorescent labels, then Applicants would also prevail on priority for chromophores because of the claim language in Smith's '058 Patent.

#### *Non-Nucleotidyl Limitation for Sig*

Applicants' attorney noted that in a related divisional application [Serial No. 08/479,997], an expert's declaration had been submitted to address the non-nucleotidyl issue. He further noted that at least two claims in the '069 Application, claims 1298 and 1582, also recited the "non-nucleotidyl" language for the detectable non-radioactive Sig moiety that comprises at least three carbon atoms. Applicants' attorney asked the Examiner if a similar expert declaration might be submitted in the '069 Application. The Examiner suggested that it should be submitted for the '069 Application.

### *Closing the Interview*

Applicants' attorney and their representative indicated to the Examiner that a modified interference request would be prepared, probably in the McKelvey count format, and would be filed later in the month.

### **Claim Amendments**

The Examiner contended during the interview that Applicants do not have written support for the term "chromogenic." Applicants respectfully disagree. Nevertheless, in the interest of expediting prosecution, Applicants have made the following claim amendments: Claims 642, 670, 794, 822, 946, 974, 1098, 1126, 1249, 1270, 1358, 1398, 1454, 1516, 1545, 1559, 1656, 1677, 1716, and 1792 have all been amended to remove recitation of a "chromogenic component." Claims 714, 866, 1018, 1170, 1291, 1404, 1468, 1565 and 1696 have all been amended to remove recitation of a "chromogenic structure." Claims 1163 and 1794 have been amended to remove recitation of a "chromogenic measurement." Claims 1728-1732, 1749, 1750, 1767-1769, 1782 and 1783 have all been amended to remove recitation of "chromogenic." Claim 1772 has been amended to recite, wherein in said generating step, "said different fluorescent indicators comprise fluorescein, rhodamine or dansyl." Claim 1773 has been amended to recite "wherein in said generating step, said one or more nucleoside triphosphates comprise a base moiety or a base analog comprising a purine, a purine analog, a 7-deazapurine, a 7-deazapurine analog, a pyrimidine, or a pyrimidine analog."

Applicants have also amended Claim 1769 to replace "wherein said fragments have been labeled by incorporation of one or more detectable non-radioactive modified or labeled nucleoside triphosphates, said nucleoside triphosphates comprising fluorescent or chromogenic indicators," with "wherein said fragments have been labeled by different fluorescent indicators." Support for this amendment is found, for instance, at page 26, 1<sup>st</sup> ¶; page 48, 1<sup>st</sup> ¶; Example 9 on pages 46-47; Original Claims 42, 43, 88, 89, and 130-133, and throughout the specification as a whole.

Applicants have also amended Claim 1298, subpart (i), to recite that the Sig moiety is "non-nucleotidyl." The Sig moiety was already characterized as "non-nucleotidyl" in subparts (ii) and (iii) of Claim 1298, and was omitted from subpart (i) in error. Applicants' present amendment remedies the oversight.

Finally, Applicants are submitting herewith attached as Exhibit A the Declaration Of Dr. Alex A. Waldrop, III. Dr. Waldrop's Declaration is being offered as additional evidence on the issue of support for the "non-nucleotidyl" recitation in the claims, namely, claims 1298 and 1582. Applicants respectfully request that consideration be given to Dr. Waldrop's Declaration as it relates to support in the '069 specification for claims in which Sig is non-nucleotidyl.

Applicants respectfully submit that the claims are in condition for allowance.

**Status of Claims After Entry**

After entry of the claims identified in the complete listing above, the status of the claims will be as follows:

**Amended claims:** 642, 670, 714, 794, 822, 866, 946, 974, 1018, 1098, 1126, 1163, 1170, 1249, 1270, 1291, 1298, 1358, 1398, 1404, 1454, 1468, 1516, 1545, 1559, 1565, 1656, 1677, 1696, 1716, 1718, 1728-1732, 1749, 1750, 1767-1769, 1772, 1173, 1782, 1783, 1792, 1794.

**Canceled claims:** None

**New claims added:** None

**Pending claims presented for further examination:** 569-571, 573-575, 577, 582-589, 592-594, 597-600, 602-604, 607-608, 610-612, 614-624, 634-635, 637-638, 641-642, 646, 648-651, 656-661, 667, 670, 707-714, 716-717, 719-723, 725-727, 729, 734-747, 749-752, 754-756, 759-760, 762-764, 766-776, 786-787, 789-790, 793-794, 796-797, 800-803, 808-813, 819, 822, 859-866, 868-869, 871-875, 877-879, 881, 886-899, 901-904, 906-908, 911-912, 914-916, 918-928, 938-939, 941-942, 945-949, 952-955, 960-965, 971, 974, 1011-1018, 1020-1021, 1023-1027, 1029-1031, 1033, 1038-1051, 1053-1056, 1058-1060, 1063-1064, 1066-1068, 1070-1080, 1090-1091, 1093-1094, 1097-1099, 1101, 1104-1107, 1112-1117, 1123, 1126, 1163-1170, 1172-1173, 1175-1179, 1181-1183, 1185, 1190-1200, 1204, 1208-1209, 1212-1216, 1218-1244, 1248-1249, 1253, 1255-1258, 1263-1270, 1272, 1275, 1278-1294, 1296-1328, 1331-1332, 1334-1351, 1353-1354, 1357-1358, 1360, 1362-1369, 1372-1380, 1383, 1386-1391, 1393-1407, 1409-1487, 1490-1491, 1493-1516, 1518, 1520-1525, 1527, 1530-1539, 1541, 1544-1568, 1570-1585, 1587, 1592-1612, 1614-1615, 1618-1621, 1623-1628, 1631-1632, 1635-1647, 1649-1656, 1658, 1660-1667, 1670-1677, 1679-1680, 1682, 1685-1773 and 1775-1796.

**Enz-5(D8)(C2)**

**Submission of Modified Request for Interference**

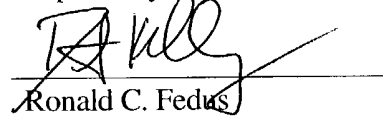
As discussed with the Examiner during the interview, Applicants' attorneys have prepared and are filing concurrently with this paper, their Modified Request For Interference Pursuant To 37 C.F.R. § 41.202. This new request takes into account the new rules of 37 C.F.R. § § 41.200-208, which took effect September 13, 2004, and the amended claims presented herein.

**CONCLUSION**

Applicants believe that no additional fees are due in connection with this paper. No new claims and have been added and the total number of claims pending in this application is less than the number of previously paid for claims. In the event that any additional fees are due, however, Applicants hereby requests that the Patent and Trademark Office charge the amount of any such fees to Deposit Account No. 05-1135.

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Respectfully submitted,



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